Preliminary Classification: Proposed Class:

Subclass:

NOTE: "All applicants are requested to include a preliminary classification on newly filed patent applications. The preliminary classification, preferably class and subclass designations, should be identified in the upper right-hand corner of the letter of transmittal accompanying the application papers, for example 'Proposed Class 2, subclass 129." M.P.E.P. Section 601, 7th ed.

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Mail Stop Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450



#### **NEW APPLICATION TRANSMITTAL**

Transmitted herewith for filing is the patent application of

Inventor(s): Masahito WATANABE, Kunihiko MURATA and Takao IKARIYA

#### **CERTIFICATION UNDER 37 C.F.R. 1.10\***

(Express Mail label number is mandatory.) (Express Mail certification is optional.)

I hereby certify that this correspondence and the documents referred to as attached therein are being deposited with the United States Postal Service on this date **December 31, 2003**, in an envelope as "Express Mail Post Office to Addressee," mailing Label Number **EV317952525 US** addressed to the: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

(type or prinname of person mailing paper)

Regina M. Edwards

Signature of person mailing paper

WARNING: Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. 1.8 cannot be used to

obtain a date of mailing or transmission for this correspondence.

\*WARNING: Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label

placed thereon prior to mailing. 37 C.F.R. 1.10(b).

"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will

not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442

WARNING: 37 C.F.R. Section 1.41(a)(1) points out:

"(a) A patent is applied for in the name or names of the actual inventor or inventors.

(1) The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by Section 1.63, except as provided for in Section 1.53(d)(4) and Section 1.63(d). If an oath or declaration as prescribed by Section 1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to Section 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in Section 1.17(i) is filed supplying or changing the name or names of the inventor or inventors."

## For (title): DIFFERENTIALLY SECTIONED SENSING ROTARY DISC

## 1. Type of Application

This new application is for a(n)

(check one applicable item below)

		(
	[X]	Original (nonprovisional)
	[]	Design
	[]	Plant
WARNING:		Do not use this transmittal for a completion in the U.S. of an International Application under 35 U.S.C.
		371(c)(4), unless the International Application is being filed as a divisional, continuation or continuation-in- part application.
WARNI	NG:	Do not use this transmittal for the filing of a provisional application.
NOTE:	TRANSA	the following 3 items apply, then complete and attach ADDED PAGES FOR NEW APPLICATION AITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED and a NOTIFICATION IN PARENT ATION OF THE FILING OF THIS CONTINUATION APPLICATION.
	[]	Divisional. Continuation.
	[]	Continuation-in-part (C-I-P).

## 2. Benefit of Prior U.S. Application(s) (35 U.S.C. Sections 119(e), 120, or 121)

NOTE: A nonprovisional application may claim an invention disclosed in one or more prior filed copending nonprovisional applications or copending international applications designating the United States of America. In order for a nonprovisional application to claim the benefit of a prior filed copending nonprovisional application or copending international application designating the United States of America, each prior application must name as an inventor at least one inventor named in the later filed nonprovisional application and disclose the named inventor's invention claimed in at least one claim of the later filed nonprovisional application in the manner provided by the first paragraph of 35 U.S.C. Section 112. Each prior application must also be:

(1) An international application entitled to a filing date in accordance with PCT Article 11 and designating the United States of America; or

- (ii) Complete as set forth in Section 1.51(b); or
- (iii) Entitled to a filing date as set forth in Section 1.53(b) or Section 1.53(d) and include the basic filing fee set forth in Section 1.16; or
- (iv) Entitled to a filing date as set forth in Section 1.53(b) and have paid therein the processing and retention fee set forth in Section 1.21(l) within the time period set forth in Section 1.53(f).

37 C.F.R. Section 1.78(a)(1).

NOTE If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., or benefit of a prior provisional application is claimed, then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

**WARNING:** 

If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. 120, 121 or 365(c). (35 U.S.C. 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. 119, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

**WARNING:** 

When the last day of pendency of a provisional application falls on a Saturday, Sunday, or Federal holiday within the District of Columbia, any nonprovisional application claiming benefit of the provisional application must be filed prior to the Saturday, Sunday, or Federal holiday within the District of Columbia. See 37 C.F.R. Section 1.78(a)(3).

[ ] The new application being transmitted claims the benefit of prior U.S. application(s). Enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

### 3. Papers Enclosed

A. Required for Filing Date under 37 C.F.R. Section 1.53(b) (Regular) or 37 C.F.R. Section 1.153 (Design) Application

55	Pages of Specification
_5_	Pages of Claims
0	Sheets of Drawings

**WARNING:** 

**DO NOT** submit original drawings. A high quality copy of the drawings should be supplied when filing a patent application. The drawings that are submitted to the Office must be on strong, white, smooth, and non-shiny paper and meet the standards according to Section 1.84. If corrections to the drawings are necessary, they should be made to the original drawing and a high-quality copy of the corrected original drawing then submitted to the Office. Only one copy is required or desired. For comments on proposed then-new 37 C.F.R. 1.84, see Notice of March 9, 1988. (1990 O.G. 57-62).

NOTE: "Identifying indicia, if provided, should include the application number or the title of the invention, inventor's name, docket number (if any), and the name and telephone number of a person to call if the Office is unable to match the drawings to the proper application. This information should be placed on the back of each sheet of drawing a minimum distance of 1.5 cm. (5/8 inch) down from the top of the page. ..." 37 C.F.R. Section 1.84(c)).

(complete the following, if applicable)

	[]	The enclosed drawing(s) are photograph(s), and there is also attached a "PETITION TO ACCEPT PHOTOGRAPH(S) AS DRAWING(S)." 37 C.F.R. Section 1.84(b). Formal Informal
	В.	Other Papers Enclosed
4.	Addi	tional Papers Enclosed
	[]	Amendment to claims  [ ] Cancel in this applications claims before calculating the filing fee. (At least one original independent claim must be retained for filing purposes.)  [ ] Add the claims shown on the attached amendment. (Claims added have been numbered consecutively following the highest numbered original claims.)
	[ ] [X] [X]	Preliminary Amendment Information Disclosure Statement (37 C.F.R. Section 1.98) Form PTO-1449 (PTO/SB/08A and 08B)
	[]	Citations Declaration of Biological Deposit Submission of "Sequence Listing," computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequence.
	[ ] [ ] [X]	Authorization of Attorney(s) to Accept and Follow Instructions from Representative Special Comments Other: 10 References

# 5. Declaration or Oath (including power of attorney)

NOTE: A newly executed declaration is not required in a continuation or divisional application provided the prior nonprovisional application contained a declaration as required, the application being filed is by all or fewer than all the inventors named in the prior application, there is no new matter in the application being filed, and a copy of the executed declaration filed in the prior application (showing the signature or an indication thereon that it was signed) is submitted. The copy must be accompanied by a statement requesting deletion of the names of person(s) who are not inventors of the application being filed. If the declaration in the prior application was filed under Section 1.47 then a copy of that declaration must be filed accompanied by a copy of the decision granting Section 1.47 status or, if a

nonsigning person under Section 1.47 has subsequently joined in a prior application, then a copy of the subsequently executed declaration must be filed. See 37 C.F.R. Section 1.63(d)(1)-(3).

NOTE: A declaration filed to complete an application must be executed, identify the specification to which it is directed, identify each inventor by full name, including the family name, and at least one given name without abbreviation together with any other given name or initial, and the residence, post office address and country of citizenship of each inventor, and state whether the inventor is a sole or joint inventor. 37 C.F.R. Section 1.63(a)(1)-(4).

NOTE: A The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by Section 1.62, except as provided for in Section 1.53(d)(4) and Section 1.63(d). If an oath or declaration as prescribed by Section 1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to Section 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in Section 1.17(I) is filed supplying or changing the name or names of the inventor or inventors. 37 C.F.R. Section 1.41(a)(I).

	[]	Enclosed Executed by
		(check all applicable boxes)
		<ul> <li>[ ] inventor(s).</li> <li>[ ] legal representative of inventor(s). 37 C.F.R. Section 1.42 or 1.43.</li> <li>[ ] joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.</li> <li>[ ] This is the petition required by 37 C.F.R. Section 1.47 and the statement required by 37 C.F.R. Section 1.47 is also attached. See item 13 below for fee.</li> </ul>
	[X]	Not Enclosed.
NOTE:	OTE: Where the filing is a completion in the U.S. of an International Application, or where the completion of the U application contains subject matter in addition to the International Application, the application may be treated continuation or continuation-in-part, as the case may be, utilizing ADDED PAGE FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION CLAIMED.	
		[ ] Application is made by a person authorized under 37 C.F.R. 1.41 on behalf of all the above named inventor(s).
	(The de	claration or oath, along with the surcharge required by 37 C.F.R. Section 1.16(e), can be filed subsequently).
		[ ] Showing that the filing is authorized.  (not required unless called into question. 37 C.F.R. Section 1.41(d))

### 6. Inventorship Statement

**WARNING:** 

If the named inventors are each not the inventors of all the claims an explanation, including the ownership of the various claims at the time the last claimed invention was made, should be submitted.

The inventorship for all the claims in this application are:

the last of inclusion incl	elaimed invention was made, is submitted.  will be submitted.	ng the ownership of the various cla	ims at the time		
the last of inclusion incl	elaimed invention was made, is submitted.  will be submitted.	ng the ownership of the various cla	ims at the time		
olication inclu	ding a giound oath on doctors				
	ding a signed oath and allowed an in-				
) is required to ).	n-English language application and	ay be filed in a language other than Englis. the processing fee of \$130.00 required by thin such time as may be set by the Office.	37 C.F.R. Section		
[]	The attached translation inclu-	des a statement that the translation	is accurate. 37		
Assignment					
[ ] i ( [X] v	s attached. A separate [ ] "Co DOCUMENT) ACCOMPAN [X] FORM PTO 1595 is also a will follow.	OVER SHEET FOR ASSIGNMEN' IYING NEW PATENT APPLICAT attached.	T		
			tion and one for		
	•	· · · · · · · · · · · · · · · · · · ·	ı continuation-in-		
Certified Copy					
ied copy(ie	s) of application(s)				
•	Appln. No.	Filed			
	2003-009786	January 17, 2003			
	Non-Eng [ ] ()  Inment  An assign [ ] i ( [ [ X] ] v ( [ ] ] v ( [ ] ] v ( [ ] assignment is a signment" Notice  A newly expart applied  fied Copy  fied Copy  fied copy(ie	Non-English [ ] The attached translation include C.F.R. Section 1.52(d).  Inment  An assignment of the invention to _K. [ ] is attached. A separate [ ] "CO (DOCUMENT) ACCOMPAN [X] FORM PTO 1595 is also a [X] will follow. [ ] was filed in parent application assignment is submitted with a new application, seignment" Notice of May 4, 1990 (1114 O.G. 77-78).  A newly executed "STATEMENT UNDER 37 C part application is filed by an assignee. Notice fied Copy  fied Copy  fied copy(ies) of application(s)	Non-English  [ ] The attached translation includes a statement that the translation in C.F.R. Section 1.52(d).  [ ] Imment  An assignment of the invention toKANTO KAGAKU KABUSHIKLE [ ] is attached. A separate [ ] "COVER SHEET FOR ASSIGNMEN" (DOCUMENT) ACCOMPANYING NEW PATENT APPLICAT [X] FORM PTO 1595 is also attached.  [ [ ] Will follow. [ ] was filed in parent application  [ ] assignment is submitted with a new application, send two separate letters-one for the application in the imperior of the application assignment." Notice of May 4, 1990 (1114 O.G. 77-78).  A newly executed "STATEMENT UNDER 37 C.F.R. Section 3.73(b)" must be filed when a part application is filed by an assignee. Notice of April 30, 1993, 1150 O.G. 62-64.  [ fied Copy  [ ] Filed		

NOTE: The foreign application forming the basis for the claim for priority must be referred to in the oath or declaration. 37 C.F.R. Section 1.55(a) and 1.63.

NOTE: This item is for any foreign priority for which the application being filed directly relates. If any parent U.S. application or International Application from which this application claims benefit under 35 U.S.C. 120 is itself entitled to priority from a prior foreign application, then complete item 18 on the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

## 10. Fee Calculation (37 C.F.R. Section 1.16)

A. [X] Regular application

Claims	Number Filed	Basic Fee Allowance	Number Extra	Rate	Basic Fee 37 C.F.R. 1.16(a) \$770.00
Total Claims (37 CFR 1.16(c))	9	- 20 =		x \$ 18.00	\$0
Independent Claims (37 CFR 1.16(b))	1	- 3 =	0	x \$84.00	\$0
Multiple Dependent Claim(s), if any (37 CFR 1.16(d))			+	\$280.00	\$0

[]	Amendment cancelling extra claims is enclosed.
[ ]	Amendment deleting multiple-dependencies is enclose

[ ] Fee for extra claims is not being paid at this time.

NOTE: If the fees for extra claims are not paid on filing they must be paid or the claims cancelled by amendment, prior to the expiration of the time period set for response by the Patent and Trademark Office in any notice of fee deficiency. 37 C.F.R. Section 1.16(d).

Filing F	ee Calcu	lation	•	770.00	
rillilly r	ee Caici	nanon		///////////////////////////////////////	

	В.	[ ] (\$320.	Design application 0037 C.F.R. Section 1.16(f)) Filing Fee Calculation	\$
	C.	[ ] (\$490.	Plant application 0037 C.F.R. Section 1.16(g)) Filing Fee Calculation	\$
11.	Small l	Entity S	Statement(s)	
	[]	Applic	ant claims small entity status.	
			(complete the following, if applicable)	
		Filing	Fee Calculation (50% of A, B or C above)	\$
NOTE:			ull fee paid will be refunded if a small entity status is establish ly payment of a full fee. The two-month period is not extenda	
12.	Reques	t for In	ternational-Type Search (37 C.F.R. Section 1.10	4(d))
			(complete, if applicable)	
	[]		prepare an international-type search report for al examination on the merits takes place.	this application at the time when
13.	Fee Pay	yment E	Being Made at This Time	
	[X]	Not En	nclosed  No filing fee is to be paid at this time.  (This and the surcharge required by 37 C.F subsequently.)	.R. Section 1.16(e) can be paid
	[]	Enclos	ed	
		[]	Filing fee	\$
		[]	Recording assignment (\$40.00; 37 C.F.R. Section 1.21(h)) (See attached "COVER SHEET FOR ASSIGNMENT ACCOMPANYING NEW APPLICATION.")	\$

		[ ]	37 C.F.R. Section 1.16(a), (f) or (g) (filing fees) 37 C.F.R. Section 1.16(b), (c) and (d) (presentation	
	[]		ommissioner is hereby authorized to charge the and during the entire pendency of this application to	<del>-</del>
WARNI	NG:		ly count claims, especially multiple dependent claims, to avoi are authorized.	id unexpected high charges, if extra claim
WARNI	NG:	If no fees	are to be paid on filing, the following items should not be cor	npleted.
15.	Authori	zation t	o Charge Additional Fees	
NOTE:	Fees shou	ld be itemi	ized in such a manner that it is clear for which purpose the fee	es are paid. 37 C.F.R. Section 1.22(b).
	[]	Charge	n the amount of \$  Account No in the amount of \$ cate of this transmittal is attached.	<u></u>
14.	Method	of Payr	ment of Fees	
			Total Fees Enclosed	\$0.00
NOTE:	complete t and 1.78(	the applica a)(1), indi	1.21(l) establishes a fee for processing and retaining any apation pursuant to 37 C.F.R. Section 1.53(f) and this, as well exate that in order to obtain the benefit of a prior U.S. applicate and retention fee of Section 1.21(l) must be paid, with	as the changes to 37 C.F.R. Section 1.53 ication, either the basic filing fee must be
		[]	Fee for international-type search report (\$40.00; 37 C.F.R. Section 1.21(e))	\$
		[]	Processing and retention fee (\$130.00; 37 C.F.R. Sections 1.53(d) and 1.21(l))	\$
		[]	For processing an application with a specification in a non-English language (\$130.00; 37 C.F.R. Sections 1.52(d) and 1.17(k)	)\$
			than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached (\$130.00; 37 C.F.R. Sections 1.47 and 1.17(i))\$	
		[ ]	Petition fee for filing by other	

Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 C.F.R. Section 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except possibly when dealing with amendments after final action.
<ul> <li>[] 37 C.F.R. Section 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)</li> <li>[] 37 C.F.R. Section 1.17(a)(1)-(5) (extension fees pursuant to Section 1.136(a).</li> <li>[] 37 C.F.R. Section 1.17 (application processing fees)</li> </ul>
"A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under Section 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in Section 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 C.F.R. Section 1.136(a)(3).
[ ] 37 C.F.R. Section 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. Section 1.311(b))
Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 C.F.R. Section 1.311(b)).
37 C.F.R. Section 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application prior to paying, or at the time of paying, issue fee." From the wording of 37 C.F.R. Section 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.
Instructions as to Overpayment
" Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 C.F.R. Section 1.26(a).
[X] Credit Account No04-1105 [ ] Refund

December 31, 2003 Reg. No. 33,860

Tel. No.: (617) 439-4444 Customer No.: 21874 Peter F. Corless EDWARDS & ANGELL, LLP P.O. Box 9169 Boston, MA 02209

SIGNATURE OF PRACTITIONER

[]	Incor	poration by reference of added pages
	applic divisio	t the following item if the application in this transmittal claims the benefit of prior U.S. ration(s) (including an international application entering the U.S. stage as a continuation on C-I-P application) and complete and attach the ADDED PAGES FOR NEW ICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S, MED)
	[]	Plus Added Pages for New Application Transmittal Where Benefit of Prior U.S Application(s) Claimed
		Number of pages added
	[]	Plus Added Pages for Papers Referred to in Item 4 Above  Number of pages added
	[]	Plus added pages deleting names of inventor(s) named on prior application(s) who is/are no longer inventor(s) of the subject matter claimed in this application.  Number of pages added
	[]	Plus "Assignment Cover Letter Accompanying New Application"  Number of pages added
[X]	Stater	nent Where No Further Pages Added
		further pages form a part of this Transmittal, then end this Transmittal with this page and the following item)
	[X]	This transmittal ends with this page.